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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/533,086

12/22/2005

Toshiyuki Iwano

Q87284

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23373 7590 07/17/2008  
SUGHRUE MION, PLLC  
2100 PENNSYLVANIA AVENUE, N.W.  
SUITE 800  
WASHINGTON, DC 20037

EXAMINER

GOLOBOY, JAMES C

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

07/17/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/533,086	<b>Applicant(s)</b> IWANO, TOSHIYUKI	
	<b>Examiner</b> James Goloboy	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 5-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/28/05</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 5-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Ikejima (U.S. Pat. No. 6,667,281).

From column 1 line 62 through column 2 line 3, Ikejima discloses a grease composition comprising a synthetic base oil and a urea thickener. The synthetic oils are further discussed in paragraph 2 lines 13-27, and can be hydrocarbon oils. In column 6 lines 11-13 Ikejima discloses that the composition can further contain a calcium sulfonate. The grease of Ikejima therefore meets the limitations of claim 5. Claims 6-11 all recite limitations for the structure that is lubricated by the grease. Since the claims are drawn to a grease, and the structure is just an intended use recitation, it does not distinguish the claims over Ikejima as the grease of Ikejima is capable of lubricating the structures of claims 6-11. Claims 6-11 are therefore also anticipated by Ikejima. It is

noted, however, that Ikejima teaches in column 6 lines 43-48 that the grease can be used to lubricate reduction gears.

3. Claims 5-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Okaniwa (U.S. Pat. No. 5,607,906).

In Table 1 (columns 5-8) Okaniwa discloses numerous examples of urea-thickened greases comprising calcium sulfonate. While a mineral oil is used as the base oil in these examples, Okaniwa discloses in column 2 lines 58-62 that the base oil can instead be a synthetic hydrocarbon oil. The greases of Okaniwa therefore meet the limitations of the grease of claim 5. Claims 6-11 all recite limitations for the structure that is lubricated by the grease. Since the claims are drawn to a grease, and the structure is just an intended use recitation, it does not distinguish the claims over Okaniwa as the grease of Okaniwa is capable of lubricating the structures of claims 6-11.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikejima in view of Kinoshita (U.S. Pat. No. 4,371,446).

The discussion of Ikejima in paragraph 2 above is incorporated here by reference. Ikejima discloses a grease meeting the limitations of claim 5, but not further comprising a montan wax.

Kinoshita, in the abstract, discloses a lubricant which can contain thickeners and waxes, which are useful in lubricating metal-plastic surfaces. In column 4 lines 6-16, Kinoshita discloses that the thickener can be a urea thickener, as in the grease of Ikejima, and the wax can be montan wax, as recited in claim 12. The addition of the wax of Kinoshita to the grease of Ikejima meets the limitations of claim 12.

It would have been obvious to one of ordinary skill in the art to include the montan wax of Kinoshita in the grease of Ikejima, as Kinoshita teaches that the waxes can be used in conjunction with a urea thickener in a lubricating grease.

7. Claims 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurokawa (U.S. PG Pub. No. 2002/0046897) in view of Ikejima.

In paragraphs 19-20, Kurokawa discloses an electric power steering device, as recited in claim 13, comprising a metal worm that meshes with a worm wheel. In paragraph 24 Kurokawa discloses that this worm wheel is a reduction gear, meeting the limitations of claims 14-15. Kurokawa further discloses in claim 24 that the worm wheel

can be made of a resin, as recited in claims 13-14 and 18, specifically a polyamide resin, as recited in claims 16 and 19. The electric power steering apparatus of Kurosawa, comprising a metal work and a polyamide resin worm wheel, therefore meets the limitations of claims 13-19 except for the lubricating grease.

The discussion of Ikejima in paragraph 2 above is incorporated here by reference. Ikejima discloses a grease comprising a synthetic hydrocarbon oil, a urea thickener, and calcium sulfonate, and teaches that this grease can be used to lubricate reduction gears. The use of this grease as the lubricant for the reduction gear in the power steering apparatus of Kurokawa meets the limitations of claims 13-19.

It would have been obvious to one of ordinary skill in the art to use the grease of Ikejima to lubricate the reduction gear in the electric power steering apparatus of Kurokawa, in order to prevent wear of the gears, and because Ikejima teaches that the grease is a suitable lubricant for reduction gears.

8. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kurokawa in view of Ikejima as applied to claims 13-19 above, and further in view of Kinoshita.

The discussions of Kurokawa in view of Ikejima in paragraph 7 above and Ikejima in view of Kinoshita in paragraph 6 above are incorporated here by reference. The addition of the montan wax of to the electrical power steering apparatus of Kurokawa meets the limitations of claim 20, and would have been obvious for the reasons stated in paragraph 6 above.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Goloboy whose telephone number is (571)272-2476. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JCG

/Glenn A Caldarola/  
Acting SPE of Art Unit 1797